

AMENDMENTS TO THE SPECIFICATION

Please amend the title as follows:

MOVING-PART WHEEL INTENDED TO COME INTO CONTACT WITH ANOTHER
MOVING OR FIXED STANDING ELEMENT

Please replace the paragraph beginning at page 1, line 1, with the following
rewritten paragraph:

BACKGROUND OF THE INVENTION

The invention consists of a ~~moving-part~~ wheel, or wheel and pinion intended to come into contact with another moving or ~~fixed~~ standing element.

Please replace the paragraph beginning at page 1, line 4, with the following
rewritten paragraph:

In watch-making, for example, when an additional ~~moving-part~~ wheel is added to an existing mechanism, ~~the pin of a moving-part~~ it may often include or incorporate a staff that has to pass right through the mechanism plate in order, ~~for example~~, to indicate something on the face, ~~for example~~. As a result, the pin staff of the ~~moving-part~~ wheel may come into contact with one or more existing components of the movement. Therefore, numerous complications arise if ~~you have to change~~ the position of the ~~swivel pin staff~~ of the ~~moving-part~~ wheel going right through the mechanism plate needs to be changed.

BRIEF SUMMARY OF THE INVENTION

~~This problem led the holder to propose~~ Accordingly, the present invention comprises a ~~moving-part~~ wheel that can be made to shift in relation to its pin staff, in such a way as to avoid contact with a pin or any other component of the movement. The pressure exerted on the ~~moving-part will~~ wheel can shift the pin rotation axis of the said ~~moving-part~~ wheel. The centre of the ~~moving-part will~~ wheel may undergo a deformation and the ~~its~~ outer edge will may be

shifted laterally. Thus, the ~~holder suggests proposing present invention comprises a moving part wheel~~ with a certain elasticity at its centre allowing it to be shifted without changing a centre distance, without altering its function and without changing its performance.

Please replace the paragraph beginning at page 2, line 5, with the following rewritten paragraph:

The ~~moving part wheel~~ according to the invention is characterised by the fact that it includes a hub turning on its axis, and a transmission or working ~~zone part~~ intended to come into contact with the moving or ~~fixed still~~ element, with an elastic ~~zone part~~ likely to undergo a deformation ~~placed in providing a mechanical linking between the hub and the transmission zone part~~.

Please replace the paragraph beginning at page 2, line 11, with the following rewritten paragraph:

According to a preferred method of construction, the elastic ~~zone part~~ ~~can~~ may consist of deformable foam or a succession of thin plates linking the hub to the transmission or working ~~zone part~~.

Please replace the paragraph beginning at page 2, line 15, with the following rewritten paragraph:

The transmission or working ~~zone part~~ ~~can~~ may be in the form of a toothed wheel.

Please replace the paragraph beginning at page 2, line 17, with the following rewritten paragraph:

The ~~moving part wheel~~ according to the invention ~~can~~ may be subjected to a pressure exerted by a bridge or a bar applied to the transmission ~~zone part~~, the pressure exerted by the

bridge bringing the ~~moving-part wheel~~ into contact with another ~~moving-part wheel~~ to be moved by deforming the elastic zone part and shifting the rotation axis of the said ~~moving-part wheel~~.

Please replace the paragraph beginning at page 3, line 3, with the following rewritten paragraph:

The ~~moving-part wheel~~ can may be used as a component part of a clutch.

Please replace the paragraph beginning at page 3, line 5, with the following rewritten paragraph:

The transmission zone part of the ~~moving-part wheel~~ can may present a succession of teeth butting up against a section of a bridge or a ~~fixed still~~ counterbore, the advance of a step or a tooth being achieved by the deformation of the elastic zone part of the ~~moving-part wheel~~. In this case, the ~~moving-part wheel~~ can may be in the shape of a star.

Please replace the paragraph beginning at page 3, line 11, with the following rewritten paragraph:

The transmission zone part of the ~~moving-part wheel~~ can may be put together in such a way as to create a friction bearing or drive. The ~~moving-part wheel~~ invented-could may also be used in mechanics in general, particularly in the automobile industry, aviation, medicine, etc.

Please replace the paragraph beginning at page 3, line 16, with the following rewritten paragraph:

BRIEF DESCRIPTION OF THE DRAWINGS

The ~~drawings-attached~~ Figures represent, as an example, several methods of construction of a ~~moving-part wheel~~ likely to be shifted in relation to its axis.

Please replace the paragraph beginning at page 4, line 1, with the following rewritten paragraph:

figure FIG. 1 represents a top view of a first method of construction of the moving part wheel,

Please replace the paragraph beginning at page 4, line 3, with the following rewritten paragraph:

figure FIG. 2 shows a situation encountered in watch-making, where the periphery of a toothed wheel arrives exactly ~~on~~ above a ~~swivel pin~~ staff,

Please replace the paragraph beginning at page 4, line 6, with the following rewritten paragraph:

figure FIG. 3 is a view of the method of construction in figure FIG. 1, ~~with~~ the moving part wheel being brought into contact with a toothed wheel by the action of a bridge exerting a pressure against the moving part wheel by shifting its ~~swivel pin~~ transmission part,

Please replace the paragraph beginning at page 4, line 11, with the following rewritten paragraph:

figure FIG. 4 shows, in rest position, a clutch between two moving parts wheels activated by a bridge,

Please replace the paragraph beginning at page 4, line 13, with the following rewritten paragraph:

figure FIG. 5 shows the clutch of figure FIG. 4 in locked position by pressure exerted by the bridge,

Please replace the paragraph beginning at page 4, line 15, with the following rewritten paragraph:

figure FIG. 6 shows a method of construction in which a bridge or a counterbore serves as a stop for a star,

Please replace the paragraph beginning at page 4, line 17, with the following rewritten paragraph:

figure FIG. 7 shows the star shifting by a notch in relation to the process of the bridge in figure FIG. 6,

Please replace the paragraph beginning at page 4, line 19, with the following rewritten paragraph:

figure FIG. 8 shows a ~~moving part~~ wheel with a succession of spring plates extending from its centre to its periphery, and

Please replace the paragraph beginning at page 4, line 22, with the following rewritten paragraph:

figure FIG. 9 shows the ~~moving part in figure~~ wheel in FIG. 8 subjected to a lateral shift.

Please replace the paragraph beginning at page 5, line 1, with the following rewritten paragraph:

The ~~moving part~~ wheel described in the different methods of construction has been developed for the watch-making industry. However, its application is not limited to this particular sector technical field, and can be extended to mechanics in general, particularly the automobile industry, aviation, micro-mechanics, machine tools, medicine, and all ~~sectors~~ fields of technology in which a ~~moving part~~ wheel has to be brought into contact with a ~~fixed or~~

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~~moving another~~ mechanical element ~~either standing or moving~~, by a deformation of the structure corresponding to a shift of its ~~centre of rotation~~ axis.

Please replace the paragraph beginning at page 5, line 12, with the following rewritten paragraph:

The ~~moving part wheel~~ represented in the different methods of construction has been developed for industry. Once in place, the ~~moving part wheel~~ represented in the method of construction in figure FIG. 1 can be brought into contact with another moving element or any other sort of transmission by being shifted from its swivel pin staff A.

Please replace the paragraph beginning at page 5, line 18, with the following rewritten paragraph:

The ~~moving part Wheel~~ 1 consists of three separate parts:
a hub 2,
an elastic part 3, and
a transmission zone part 4.

Please replace the paragraph beginning at page 6, line 1, with the following rewritten paragraph:

In figure FIG. 1, the ~~moving part wheel~~ 1 comes into contact with another moving part element 5 and is driven by a pinion 6, which exerts a lateral pressure on the transmission zone part 4 and brings it into contact with the moving part element 5, and the rotation centre A axis of the ~~moving part wheel~~ 1 being then slightly shifted to the right with respect to its staff A.

Please replace the paragraph beginning at page 6, line 11, with the following rewritten paragraph:

The shifted ~~moving-part wheel~~ can even be shifted intermittently in full movement. This does not result in any change in operation. It can also be shifted permanently.

Please replace the paragraph beginning at page 6, line 15, with the following rewritten paragraph:

The operation of the ~~moving-part wheel~~ 1 in figure FIG. 1 will be explained in detail with regard to figure FIG. 3.

Please replace the paragraph beginning at page 6, line 17, with the following rewritten paragraph:

Figure FIG. 2 shows one of the problems encountered by watch-makers, in which a ~~pin staff~~ passing through the mechanism plate of a watch comes into contact with the edge of a mechanism of the movement.

Please replace the paragraph beginning at page 7, line 1, with the following rewritten paragraph:

When an additional module is added to an existing mechanism, it often happens that the ~~pin a staff~~ 7 of a moving part has to pass right through the mechanism plate in order to indicate, for example, something on the face, ~~for example~~. As a result, the ~~pin staff~~ can come into contact with one or more existing components, for example, ~~moving-part wheel~~ 8 engaging another ~~moving-part wheel~~ 9. There are therefore numerous complications if you have to change the position of the swivel-pin ~~staff~~ 7 needs to be changed. This situation has led to the solution proposed in order to overcome this problem, ~~one~~. One simply has to slightly force the ~~moving part wheel~~ to avoid the ~~pin staff~~ 7, without changing a single centre distance, without altering the function and without changing the performance of the ~~moving-parts wheels~~.

Please replace the paragraph beginning at page 7, line 15, with the following rewritten paragraph:

This solution can also overcome smaller problems encountered in watch-making, such as roundness¹-defects in moving parts wheels or bracing problems between moving parts wheels. Minor defects due to the positions of the swivel staff holes of different moving parts wheels can also be easily corrected.

Please replace the paragraph beginning at page 7, line 21, with the following rewritten paragraph:

In the view in figure-FIG. 3, the moving part wheel 1 is in contact with a bridge P or any component whatsoever coming into contact with the transmission ~~zone~~ or a solid part of this zone. The pressure exerted by the bridge P puts a stress on the elasticity of the central part shifting only the ~~part containing the transmission zone part~~. This The latter remains in contact with the next moving part, and the ~~theoretical positioning of the swivel pin wheel~~, while the position of the staff A of hub 2 remains unchanged.

Please replace the paragraph beginning at page 8, line 7, with the following rewritten paragraph:

The main advantage lies in the fact that the transmission ratio or the angular pitch is maintained whilst being shifted from its swivel pin staff A. ~~[[No]] There is no~~ need to change the module or the centre distance or even the ratio. ~~You just have to force the moving part~~ The wheel need only be forced so that it is outside the trajectory to be avoided. It is also possible that ~~it is~~ our it is only the transmission zone part that remains fixed still, and that ~~the~~ hub 2 is shifted. The swivel would therefore depend on the axial performance of the transmission zone part 4, which does not pose major problems.

Please replace the paragraph beginning at page 8, line 17, with the following rewritten paragraph:

¹Translator's note: "mal ronds" is assumed to mean "roundness", although only one reference to it could be found anywhere.
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The method of construction in figures FIGS. 4 and 5 shows a moving part 10 similar to the moving-part wheel 1 in figures FIGS. 1 to 3, with its hub 2, its elastic part 3, and its transmission zone part 4. The moving-part Wheel 10 is intended to engage another moving part 5 as in the previous method of construction and the unit shown in figures FIGS. 4 and 5 will function as a low motion clutch.

Please replace the paragraph beginning at page 9, line 1, with the following rewritten paragraph:

The elasticity of the moving-part wheel 10 is therefore used to create a low motion clutch, for example, for a time meter in a timer. This same elasticity can be used in order to guarantee the penetration of the teeth with ratchets or other elements, while handling the pivots of the moving-parts wheels. In figure FIG. 4, the clutch is in rest position, the moving-part wheel 5 not being driven, and the elastic moving-part wheel 10 is being able to turn freely on its pin shaft A.

Please replace the paragraph beginning at page 9, line 10, with the following rewritten paragraph:

In figure FIG. 5, the bridge P undergoes a translation, comes into contact with the moving part- wheel 10, and presses it against the moving-part wheel 5, shifting the wheel rotation axis A by a deformation of the zone part 3. The moving-part Wheel 10 is then in an engaged position.

Please replace the paragraph beginning at page 9, line 15, with the following rewritten paragraph:

In the module in figures FIGS. 6 and 7, the moving-part wheel 20, with its hub 2, the elastic part 3, and its transmission zone part 4, is in the form of a star performing the function of a catch. The elastic Elastic part 3 of the star 20 performs the function usually performed by a spring plate. A section 21 of the catch is part of a bridge P or a fixed still counterbore.

Please replace the paragraph beginning at page 9, line 22, with the following rewritten paragraph:

The star Star 20 thus advances by a notch, or a step, by a deformation of the elastic zone part 3 as represented in figure FIG. 7, and the star comes back into place after the passage of a point relative to the section 21.

Please replace the paragraph beginning at page 10, line 4, with the following rewritten paragraph:

Still in the sector field of watch-making, the moving part wheel 1, 10 or 20 can be used as a lateral shock absorber for all watch applications.

Please replace the paragraph beginning at page 10, line 7, with the following rewritten paragraph:

In the method of construction in figures FIGS. 8 and 9, the moving part wheel 30 includes a hub 2, an elastic zone part 3 consisting of a succession of concentric plates 31 fixed to the connected hub 2 and the transmission zone ~~3~~ part 4. As mentioned above, the method of construction of figures FIGS. 8 and 9 is not only intended for watch-making, but can be adapted to other applications such as car suspensions ~~for example~~. In fact, this system, adapted vertically and directly to wheels, can absorb shocks of all kinds and in all directions.